

What is claimed is:

1. An apparatus for delivering electrical energy to a heart in order to terminate a tachyarrhythmia, comprising:

a sensing channel for detecting electrical events in the heart and producing sensing signals in accordance therewith;

processing circuitry for detecting the occurrence of a tachyarrhythmia from the sensing signals;

an electrode arrangement consisting of a first electrode for disposition within the coronary sinus, a second electrode for disposition within the superior vena cava or right atrium, and an extravascular electrode for location in proximity to the heart; and,

a pulse generator for delivering a voltage pulse between first and second terminals, wherein the first terminal is connected to the first electrode, and the second terminal is connected to the second and extravascular electrodes.

2. The apparatus of claim 1 wherein the first and second terminals of the pulse generator are made electrically positive and negative, respectively, during delivery of a voltage pulse.

3. The apparatus of claim 1 wherein the pulse generator delivers a biphasic voltage pulse.

4. The apparatus of claim 1 wherein the extravascular electrode is a cutaneous patch.

5. The apparatus of claim 1 wherein the extravascular electrode is an implantable housing.

6. An apparatus for delivering electrical energy to a heart in order to terminate a tachyarrhythmia, comprising:

a sensing channel for detecting electrical events in the heart and producing sensing signals in accordance therewith;

processing circuitry for detecting the occurrence of a tachyarrhythmia from the sensing signals;

a first electrode for disposition within the right ventricle, a second electrode for disposition within the superior vena cava or right atrium, a third electrode for disposition within the coronary sinus, and an extravascular electrode for location in proximity to the heart; and,

a pulse generator for delivering a voltage pulse between first and second terminals, wherein the first terminal is connected to the first electrode, and the second terminal is connected to the second, third, and extravascular electrodes.

7. The apparatus of claim 6 wherein the first and second terminals of the pulse generator are made electrically positive and negative, respectively, during delivery of a voltage pulse.

8. The apparatus of claim 6 wherein the pulse generator delivers a biphasic voltage pulse.

9. The apparatus of claim 6 wherein the extravascular electrode is a cutaneous patch.

10. The apparatus of claim 6 wherein the extravascular electrode is an implantable housing.

11. A method for terminating an atrial tachyarrhythmia occurring in a patient's heart, comprising:

constructing an electrode arrangement consisting of a first electrode disposed within the coronary sinus, a second electrode disposed within the superior vena cava or right atrium, and an extravascular electrode located in proximity to the heart;

detecting the occurrence of an atrial tachyarrhythmia;

delivering a voltage pulse to first and second terminals wherein the first terminal is connected to the first electrode, and the second terminal is connected to the second and extravascular electrodes.

12. The method of claim 11 wherein the first and second terminals of the pulse generator are made electrically positive and negative, respectively, during delivery of a voltage pulse.

13. The method of claim 11 wherein the pulse generator delivers a biphasic voltage pulse.

14. The method of claim 11 wherein the extravascular electrode is a cutaneous patch.

15. The method of claim 11 wherein the extravascular electrode is an implantable housing.

16. A method for terminating a ventricular tachyarrhythmia occurring in a patient's heart, comprising:

disposing a first electrode within the right ventricle, a second electrode within the superior vena cava or right atrium, a third electrode within the coronary sinus, and an extravascular electrode in proximity to the heart;

detecting the occurrence of a ventricular tachyarrhythmia; and,
delivering a voltage pulse to first and second terminals wherein the first terminal is connected to the first electrode, and the second terminal is connected to the second, third, and extravascular electrodes.

17. The method of claim 16 wherein the first and second terminals of the pulse generator are made electrically positive and negative, respectively, during delivery of a voltage pulse.

18. The method of claim 16 wherein the pulse generator delivers a biphasic voltage pulse.

19. The method of claim 16 wherein the extravascular electrode is a cutaneous patch.

20. The method of claim 16 wherein the extravascular electrode is an implantable housing.